

RICK'S CORNER

SOLID WASTE SECTION NEWS

STAFF CHANGES

The Solid Waste Program once again has staff vacancies. Since the last publication of this newsletter, *George Scriba* and *Pat Potts* have left the Solid Waste Program to join other programs in DEQ. George is now with the Enforcement Division and Pat is with the Ground Water Protection Bureau. We wish them luck in their new endeavors. Mary Louise Hendrickson, who joined the Program two years ago, has transferred into Pat Potts' position as the regulatory program hydrogeologist. With the departures and transfer, the two program inspector positions are currently vacant. For future reference, please address your hydro reports, questions, or concerns to Mary. We hope to have the other vacancies filled by early spring.

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IS IT ANTIQUE OR IS IT JUNK?

DARRELL STANKEY – JV PROGRAM MANAGER

Picture this – you're driving down a lonely stretch of Montana highway on a hot summer day, daydreaming as you become mesmerized by the heat waves streaming from the pavement, and just beyond that bend in the river up ahead you catch a glimpse of a cache of old junk cars – or are they? As you strain your eyes for a closer look, you can make out some of the makes and models – a '69 Ford Mustang Boss 429, a '69 Chevy Camaro Z28, even a '69 Dodge Daytona Charger. Memories indeed. This starts you thinking.....what kind of shape are they in, do they run, are they antique, or just junk?

Junk vehicles are defined in 75-10-501(4) Montana Code Annotated (MCA). The definition reads: **"Junk vehicle" means a discarded, ruined, wrecked, or dismantled motor vehicle, including component parts, that is not lawfully and validly licensed and remains inoperative or incapable of being driven.**

On the other hand, antique vehicles are mentioned as "collector item vehicles" in 61-3-411 MCA. An owner of a motor vehicle that is more than 30 years old and that is used solely as a collector's item and not for general transportation purposes may file with

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IMPORTANT DATES TO REMEMBER

SOLID WASTE MANAGEMENT FACILITIES

1st quarter fee - July 31

2nd quarter fee - October 31

3rd quarter fee - January 31

4th quarter fee - April 30

Annual Report and Financial Assurance Update -
April 1

SWAC Meeting – May 4, 2005

SEPTIC TANK PUMPERS

Renewal Applications postmarked by April 1

January – June Records Due – July 15

SPAC Meeting – April 22, 2005

JUNK VEHICLE PROGRAM

1st quarter Graveyard Log Sheets - April 30

2nd quarter Graveyard Log sheets - July 30

3rd quarter Graveyard Log Sheets - November 30

4th quarter Graveyard Log Sheets - January 30.

ANTIQUE VS. JUNK

(Continued from page 1)

the Department of Motor Vehicles an application for the registration of that motor vehicle. This vehicle may be a "junk vehicle" if it meets the elements found in the junk vehicle definition. However, if the collector item vehicle is registered **and** licensed, regardless of its physical condition, it would not qualify as a junk vehicle.

For the cache of vehicles you just spotted, they may or may not be junk. Questions? Contact the Junk Vehicle Program at 406-444-5300.

SELF-PACED COMPUTER HAZWOPER TRAINING

The Solid Waste Program has been informed that a computer based HAZWOPER refresher training has been developed by Paul Brox of Butte. This may be useful to people who live away from training opportunities or who cannot afford to take an entire day off to obtain the certification.

Paul Brox may be reached by phone at (406)494-5162 or email pbrox@msn.com.

The Department provides this contact for informational purposes only. No endorsement or recommendation of specific products or services is implied.

SOLID WASTE – FUN FACTS

If these items were thrown on the side of the road, this is the amount of time required for them to break down:

- Banana Peel – 2 to 5 weeks
- Newspaper – less than 1 year
- Aluminum can – 200 to 500 years
- Glass jar – 1,000,000 years
- Petroleum based plastic bottle – never

Source: 3-2-1 Contact: The Rotten Truth

In 1388, the English Parliament banned the disposal of waste in public waterways and ditches

In 1400, garbage piles up so high outside the gates of Paris that it compromises the city's defenses

In 1757, Ben Franklin starts the first municipal street cleaning operation in Philadelphia

In 1842, a report in England links disease to filthy environmental conditions and helps launch the "Age of Sanitation"

In 1896, waste reduction plants that compress organic wastes to extract grease, oils, and other by-products are introduced in the U.S. but are later closed because of their noxious emissions

In the 1900's, piggeries are developed in small- to medium-sized towns where swine are fed fresh or cooked garbage

In 1938, the first compactor truck (Load Packer by Garwood) is introduced, but not widely used until the late 1940's

In 1965, the Solid Waste Disposal Act authorizes research and provides funding for state grants

In 1984, during the Olympic Games in Los Angeles, athletes, trainers, coaches, and spectators produce 6.5 million pounds of trash in 22 days

In 1986, Fresh Kills on Staten Island, New York becomes the largest landfill in the world

In 1989, Arizona archeologist William Rathje recovers corn on the cob intact after 18 years in an Arizona landfill

In 2002, Fresh Kills landfill is closed

Source: National Solid Waste Management Association

WHITE GOODS: ELIMINATING THE DANGERS

K. Michele Fitcher, Solid Waste Licensing Program (406) 444-3493 or email, mfitcher@mt.gov.

Ever questioned why the inspection of white goods is part of the landfill inspection? Initially, one might naturally assume that it's associated with a Solid Waste Management law or rule. However, it is actually associated with Section 45-8-113 Montana Code Annotated (MCA), which discusses crimes (Title 45) and offenses against public order (Chapter 8).

Section 45-8-113 MCA states: "(1) A person commits the offense of creating a hazard if he knowingly: (a) discards in any place where it might attract children a container having a compartment of more than 1 1/2 cubic feet capacity and a door or lid that locks or fastens automatically when closed and cannot easily be opened from the inside and fails to remove the door, lid, or locking or fastening device;"

If you are questioning how this law affects solid waste management landfills, consider this:

When white goods arrive at the landfill their doors are initially still intact. They are then transported to an area designated specifically for the temporary storage of white goods. They will remain in the white goods area until their refrigerant has been properly removed and they can be picked up and transported to a recycling facility. White goods appear to adults as something simple and obvious – old refrigerators and freezers being temporarily stored for refrigerant removal and future recycling. To a young curious child, however, white goods become transformed into something more complex and less obvious – a playground of castles waiting to be discovered.

The Solid Waste Program encourages all landfill operators and managers to be actively involved with this important element of landfill safety. It's easy to believe the odds of a child becoming trapped inside a refrigerator or freezer with a self-locking door are a "one in a million" occurrence, but who would want to take such a risk?



Murphy's Law: Everything can go wrong all at once.

SPAC News

The Septic Tank Pumpers Advisory Committee (SPAC) last met in December, 2004 to discuss the proposed legislation for a license fee increase (see **Rick's Corner** for details) and the use of a portion of the funds generated to fund Department-sponsored educational programs for septic tank pumpers in the state. The Committee has determined that training for licensed pumpers should be conducted for the following areas:

- Recordkeeping
- Laws and Rules
- Site Management
- Equipment Selection and Maintenance

If you have suggestions for training topics in any of the four areas noted above, please contact your regional SPAC representative or Mary Louise Hendrickson. The next SPAC meeting is scheduled in Helena for April 22, 2005, from 12:30 – 3:00 pm in Room 111 of the Metcalf Building. New items can be placed on the agenda after meetings by contacting the Committee Chairman or Secretary. For more information, contact Mary Louise Hendrickson at 444-1808 or email mhendrickson@mt.gov

SPAC REPRESENTATIVES BY REGION

Brian Tatman, Heavy Water Haulers, Winnett

Region 1 and 2 - Counties: *Phillips, Daniels, Valley, Sheridan, Roosevelt, Richland, McCone, Garfield, Petroleum, Dawson, Prairie, Wibaux, Fallon, Carter, Custer, Powder River, Rosebud, Treasure, Big Horn*

Jamie Hillman, Jim's Backhoe & Septic Service, Livingston

Region 3 - Counties: *Wheatland, Golden Valley, Musselshell, Yellowstone, Stillwater, Sweet Grass, Park, Carbon*

John Clark, Scenic City Pumping, Bozeman**Alternate – Wade Stout, Badger Pass Septic Service, Dillon**

Region 4 - Counties: *Deer Lodge, Silver Bow, Jefferson, Beaverhead, Madison, Gallatin*

Conrad Eckert, Eckert's Services, Stevensville**Alternate – Susan Bashor, Sweet Pea Sewer and Septic, Missoula**

Region 5 - Counties: *Lincoln, Flathead, Sanders, Lake, Missoula, Mineral, Granite, Ravalli*

Steve Kunkel, Montana Waste Systems, Great Falls**Alternate – Don Heimbigner, Don's Septic Service, Chester**

Region 6 - Counties: *Glacier, Toole, Liberty, Hill, Blaine, Chouteau, Pondera, Teton*

Vince Hoff, A-1 Septic Services, Helena**Alternate – Gary Turney, Gary's Septic Service, Townsend**

Counties: *Powell, Lewis & Clark, Cascade, Broadwater, Judith Basin, Meagher, Fergus*

Committee Chairman: Mike Byrnes, Superior Septic Service, Superior

County Sanitarian Representative – Ross Knapper, Gallatin County, Bozeman

DEQ Representative/Secretary Mary Louise Hendrickson, DEQ Solid Waste Program

MOLO TRAINING NOW PROVIDES MONTANA PERSPECTIVE

Tim Stepp, Solid Waste Program, 406-444-4725 or email tstepp@mt.gov

Every two years, the Montana Department of Environmental Quality (MDEQ) and the Montana Association of Counties (MACo) fund a Manager of Landfill Operations (MOLO) classroom training course and certification exam for Montana municipal solid waste (MSW) professionals. The MOLO training manual and exam are developed and administered nationally by the Solid Waste Association of America (SWANA) and instructors are MOLO certified professionals that travel to Montana to teach the course. The Montana training and certification is organized through the Montana State University Extension Service and has typically been held in Billings. During the training held in 2000, fifteen people were certified - in 2002, seven were certified. Since 2000, thirty-seven people have renewed their MOLO certifications.

In 2004, the SWANA training was organized by Mike Vogel (MSU-Extension), Rick Thompson (MDEQ Solid Waste Program) and Jim Wilbur (JRW Consulting). Due to increasing cost considerations associated with out-of-state SWANA instructors, the 2004 MOLO course was taught by MOLO-certified instructors selected from a variety of organizations in Montana. The instructors included Jim Wilbur (landfill consultant), Dave Prunty (landfill manager, Flathead Co.), Pat Crowley (MDEQ regulatory lead), Mary Louise Hendrickson (MDEQ inspector/hydrogeologist), and Tim Stepp (MDEQ geological engineer). Each instructor covered topics with which they were most familiar and presented the material content according to the sections provided by SWANA's MOLO Training Manual.

Participant evaluations of this approach were highly favorable. In fact, the 93% pass rate for the 2004 course is the highest on record for the Montana MOLO certification. There has already been some discussion during quarterly SWAC meetings regarding a Montana-based certification process for landfill managers and operators that would parallel the approach implemented in some of the other certification programs administered by MDEQ. Landfill regulators and MSW professionals benefit from the certification process because it supports an ongoing compliance partnership by providing a common baseline on which landfill performance is based.

2005 WASTE-NOT CONFERENCE: MOBILE GLASS PULVERIZER TO BE UNVEILED

We have turned the corner and 2005 will be a great year for recycling in Montana! After working on the mobile glass pulverizer for over two years, the project will be rolled out in April during the **Waste-Not Conference** in Chico Hot Springs. The two-day conference is slated for April 11 – 12, 2005. In addition to the vendor show, highlights will include the unveiling of the mobile glass pulverizer and a bus tour of Yellowstone National Park. The glass pulverizer is an exciting project and DEQ's Brian Spangler will be on hand to share the evolution of this project and where it's headed. This will include a barbeque lunch. On the second day of the conference, Yellowstone National Park will sponsor a guided bus tour with lunch.

Conference keynote speaker will be Dayna Baumeister, Ph.D. She will speak on Biomimicry - a new science that studies nature's models and then imitates or takes inspiration from these designs and processes to solve human problems. Other conference topics will include Tire Recycling, Plastics Recycling, Challenges in Urban Recycling, Regional Update on Alternative Fuels, Electronics Recycling and Sustainability on a Local and Global Scale.

This year's conference promises to be enlightening and a great opportunity to learn what's going on in the world of recycling in our state. For more information about attending the conference contact: **Headwaters Cooperative Recycling** at 406-225-3194. Details of the conference can be viewed at: <http://www.deq.state.mt.us/Recycle/WNPC05.pdf>.



MANAGING DAILY COVER **AND** SNOWFALL DURING THE WINTER

K. Michele Fitcher, Solid Waste Licensing Program, (406)444-3493 or email mfitcher@mt.gov

During the winter when snowfall can be abundant, operators and managers are easily tempted to forego the application of proper daily cover. Some consider the thought, "Why not? This fresh snow that we're expecting today could cover the entire working face in less than two minutes!". Others contemplate the odds of the landfill inspector visiting that day.

On a Murphy's Law day anyone could be tempted to forego daily cover. Some may justify their decision by convincing themselves that the expensive liner system will compensate for the absence of true daily cover. The truth is, however, even if a solid waste management landfill has the best liner or structural design, the landfill would *still* require the best daily operation in order for the landfill to maximize its success in protecting the groundwater or local aquifer.

Is it possible to maintain daily cover during the winter when employees are out sick and the equipment is down? The answer is yes. A landfill manager or operator can achieve *uniform* daily cover by (1) keeping the working face small and (2) maximizing compaction of the waste. By doing these two things, the completing tasks associated with predictable snowstorms become more attainable.

During the winter months the goal should be to maintain daily cover not only to discourage scavengers but more importantly, to apply a protective barrier over the fresh garbage. Without it, garbage absorbs the snowmelt and contributes to the generation of leachate. Please remember, in efforts to *maximize* the protection of the uppermost aquifer beneath the landfill, both daily and final cover *and* the liner system must be properly maintained on a daily basis.

NEW E-MAIL ADDRESSES

The State of Montana, along with other states and units of government, has changed domains. This was done to provide a more secure interface for citizens - so that they know a government site is an official site and not a fake. At the beginning of 2005 the new address for the DEQ web site changed to www.deq.mt.gov <<http://www.deq.mt.gov>>. The old DEQ website address will continue to work, but it will redirect people to our new one. The new State email addresses now end in **mt.gov**. Both the old email addresses *name@state.mt.us* and the new addresses *name@mt.gov* will work for inbound email through December 2005. Please note this change in your email address books.

ONSITE WASTEWATER TREATMENT SYSTEMS: SEPTIC TANK ADDITIVES

The following information is from EPA's "Onsite Wastewater Treatment Systems, Special Issues Fact Sheet 1 – Septic Tank Additives."

Because of the presence of significant numbers and types of bacteria, enzymes, yeasts, and other fungi and microorganisms in typical residential and commercial wastewaters, the use of septic system additives containing these or any other ingredients is not recommended. The benefits of consumer products sold as septic system cleaners, degraders, decomposers, deodorizers, organic digesters, or enhancers are not significant or have not been demonstrated conclusively, depending on the product. Some of these products can actually interfere with treatment processes, affect biological decomposition of wastes, contribute to system clogging, and contaminate ground water. The septic tank/soil absorption field system is the most commonly used onsite wastewater treatment system in the United States. It is relatively low in cost, has no moving parts, and requires little maintenance.

Septic tanks have a number of important functions, including:

- **Remove oils, grease and settleable solids.** The septic tank is designed to provide quiescent conditions over a sufficient time period to allow settleable solids to sink to the bottom of the tank and floatable solids, oils, and grease to rise to the surface. The result is a middle layer of partially clarified effluent that exits the tank to the soil absorption field.
- **Store settleable and floatable material.** Tanks are generously sized according to projected wastewater flow and composition to accumulate sludge and scum at the bottom and top of the tank, respectively. Tanks require pumping at infrequent intervals (e.g., 1 to 7 years), depending on sludge and scum accumulation rates.
- **Digest/decompose organic matter.** In an anaerobic environment, facultative and anaerobic bacteria can reduce retained organic molecules to soluble compounds and gases, including H₂, CO₂, NH₃, H₂S, and CH₄. This digestion can significantly reduce sludge volume in warm climates.

Types of additives and effects on treatment processes:

There are three general types of commonly marketed septic system additives:

- **Inorganic compounds**, usually strong acids or alkalis, are promoted for their ability to open clogged drains. Product ingredients (e.g., sulfuric acid, lye) are similar to those used in popular commercial drain cleaners. These products can adversely affect biological decomposition processes in the treatment system and cause structural damage to pipes, septic tanks, and other treatment system components. Hydrogen peroxide, once promoted as an infiltration field reconditioner, has been found to actually degrade soil structure and compromise long-term viability of soil treatment potential. Its use to unclog failed infiltration fields is no longer recommended.
- **Organic solvents**, often chlorinated hydrocarbons (e.g., methylene chloride, trichloroethylene) commonly used as degreasers and marketed for their ability to break down oils and grease. Organic solvents represent significant risks to ground water and wastewater treatment processes. These products can destroy resident populations of decomposer and other helpful microorganisms in the treatment system. Use of products containing organic solvents in onsite treatment systems is banned in many states. Introduction of organic solvents into onsite systems located in states that ban the use of these products may trigger liability issues if ground water becomes contaminated.
- **Biological additives**, like bacteria and extracellular enzymes mixed with surfactants or nutrient solutions, which mirror but do not appear to significantly enhance normal biological decomposition processes in the septic tank. Some biological additives have been found to degrade or dissipate septic tank scum and sludge. However, whether this relatively minor benefit is derived without compromising long-term viability of the soil infiltration system has not been demonstrated conclusively. Some studies suggest that material degraded by additives in the tank contributes to increased loadings of BOD, TSS, and other contaminants in the otherwise clarified septic tank effluent. Other products containing formaldehyde, paraformaldehyde, quaternary ammonia, and zinc sulfate are advertised to control septic odors by killing bacteria. This objective, however, runs counter to the purpose and function of septic tanks (promoting anaerobic bacterial growth). If odor is a problem, the source should be investigated because sewage may be surfacing, a line might have ruptured, or another system problem might be present. Another variety of consumer products is marketed for their ability to remove phosphorus from wastewater. These products are targeted at watershed residents who are experiencing eutrophication problems in nearby lakes and streams. Phosphorus is an essential nutrient for aquatic plant growth and limiting its input to inland surface waters can help curtail nuisance algae blooms. Aluminum (as alum, sodium aluminate, aluminum chloride, and activated alumina), ferric iron (as ferric chloride and ferric sulfate), ferrous iron (as ferrous sulfate and ferrous chloride), and calcium (as lime) have been proven to be effective in stripping phosphorus from effluent and settling it to the bottom of the tank. An important side effect of this form of treatment, however, can be the destruction of the microbial population in the septic tank due to loss of buffering capacity and a subsequent drop in pH. Treatment processes can be severely compromised under this scenario. Finally, baking soda and other flocculants are marketed as products that lower the concentration of suspended solids in septic tank effluent. Theoretically, flocculation and settling of suspended solids would result in cleaner effluent discharges to the subsurface wastewater infiltration system. However, research has not conclusively demonstrated significant success in this regard. **A complete list of references used to develop this EPA Special Issues Fact Sheet are available upon request to IOWWA.**

LEGISLATIVE UPDATE

The solid waste program had a light agenda for this session. The only bill with a direct impact on the program was House Bill (HB) 48. The bill, as introduced, would have removed the regulatory exemption to the licensing provisions of the SWMA for coal combustion wastes from coal fired power generation facilities. This bill failed on second reading on the House floor.

HB 77, a bill introduced to modify the Septic Tank, Cesspool and Pit Privy Cleaners Act to increase operator licensing fees passed both houses of the legislature and is awaiting the Governor's signature. The law as passed will increase licensing fees from \$125 to \$300. The increase was necessary to cover the Septic Tank Pumper Program funding shortfall experienced during the last fiscal year. Fifty dollars of each licensing or renewal fee will be dedicated to developing and conducting training for licensed septic tank pumpers in the state. The law becomes effective on July 1st 2005.

RULES

The solid waste rule revisions are near completion. The proposed revisions are going through the final program edits before being sent to the Secretary of State's Office for review followed by a public comment period. The revision of the solid waste rules consists of minor changes to make the existing rules more user friendly as well as to include new rules for petroleum impacted soil treatment facilities (landfarms). New compost facility rules are also included in the revised rule packet. We will be sending notices of the public comment period when that time comes.

If you have any questions or comments, I can be contacted at by phone at (406) 444-5345, or by email at rithompson@mt.gov.

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